

CLAIMS

1. A diesel engine exhaust gas particulate matter oxidation catalyst using a perovskite-type composite oxide that has an NO adsorption domain in the range 200–450°C.
2. A diesel engine exhaust gas particulate matter oxidation catalyst according to claim 1, wherein the perovskite-type composite oxide may be represented by the structural formula RTO_3 , where R is one or more elements selected from a group made up of the rare-earth elements, alkali metal elements excluding Na and alkaline-earth metal elements; and T is one or more elements selected from a group made up of the transition metal elements and Mg, Al and Si.
3. A diesel engine exhaust gas particulate matter oxidation catalyst according to claim 1, wherein the perovskite-type composite oxide may be represented by the structural formula RTO_3 , where R comprises one or more elements selected from a group made up of La, Sr, Ba, Ca and Li; and T comprises one or more elements selected from a group made up of Mn, Fe, Co, Cu, Zn, Ga, Zr, Mo, Mg, Al and Si.
4. A diesel engine exhaust gas particulate matter oxidation catalyst according to any of claims 1–3, wherein, in an exhaust gas atmosphere that contains NO, the catalyst initiates the combustion of particulate matter constituted primarily of carbon in diesel engine exhaust at a temperature below 450°C.
5. A particulate matter filter for control of diesel engine exhaust emissions that carries a diesel engine exhaust gas particulate matter oxidation catalyst according to any of claims 1–4.